

REAL PARTY IN INTEREST

The real party in interest is **ArvinMeritor Technology, LLC**, assignee of the present invention.

RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings related to, may directly affect or may be directly affected by or have a bearing on the Board's decision in this appeal.

STATUS OF CLAIMS

Claims 1-5 and 14-20 are pending, rejected and appealed.

Claims 6-13 have been withdrawn

STATUS OF AMENDMENTS

All amendments have been entered.

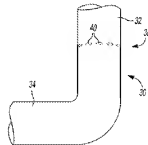
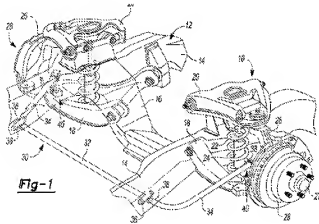
SUMMARY OF CLAIMED SUBJECT MATTER

A vehicle stabilizer bar is a rod-shaped member oriented to extend laterally across the vehicle and an arm segment extending longitudinally at each end of the central segment. The central segment of the stabilizer bar is supported for rotation about its own longitudinal axis by one or more mounting brackets which are fixed to the vehicle body or frame. The distal end of each arm segment is coupled to a control arm of the suspension system by an end link. [¶2-4]

The stabilizer bar may shift laterally during suspension articulation. The lateral shift is resisted by a multiple of collars mounted to the central segment of the stabilizer bar. The collars facially engage bushings mounting to the vehicle body or frame to minimize lateral shift of the stabilizer bar. The collars are mounted to the stabilizer bar after final shot peening and bending operations are performed to avoid reducing the stabilizer bar integrity. Due to the collar mounting locations and forming requirements, conventional collars are overmolded plastic components or collars that are mechanically clamped to the bar. Although effective, overmolded collars may be subject to relatively rapid wear while clamped collars have heretofore been complicated to mount, may loosen over time, and are relatively expensive. [¶5-6]

The present invention relates to a vehicle stabilizer bar, and more particularly to a thermally formed lateral retainer therefor. [¶1]

Figure 1 illustrates a general perspective view of an independent front wheel suspension system 10. A vehicle frame 12 includes a pair of longitudinal side rails 14 and a crossbeam 16. A stabilizer bar assembly 30 includes an elongated central segment 32 that extends laterally across the vehicle and a pair of arm segments 34, which extend longitudinally along the vehicle at each end of central segment 32. Central segment 32 is rotatably attached to frame rails 14 through a pair of mounting brackets 36. An anti-shift collar 38 is thermally formed upon the central segment 32 (also illustrated in Figure 2) adjacent the mounting brackets 36 to minimize lateral shift of the stabilizer bar assembly 30. [¶¶16-18]



As generally understood, thermal spraying includes the localized application of a molten metal such as steel onto a substrate. The molten metal solidifies upon contact with the substrate to form a built up area. Thermal spraying can be performed before or after shot peening. Shot peening produces a plastically deformed surface which increases the surface residual stress on the bar resulting in a non-uniform distribution of stress along the cross-section of the bar to thereby increase the strength of the bar. A shot peened surface is also an effective surface preparation operation for application of thermal forming to a substrate. Other thermal forming operations such as warm spraying will likewise benefit from the present invention. Warm spraying includes spraying a metal powder at elevated temperatures onto a substrate. A

combined effect of heat and plastic deformation of the metal powder results in welding of the powder to the substrate to form a raised area. [¶¶19-20]

Referring to Figure 2, the anti-shift collar 38 preferably includes a circumferential array of raised areas 40 which are thermally formed to the central segment 32. It should be understood that the term “collar” is to be construed broadly in that even a single raised area will operate as an anti-shift collar 38 as defined herein. It should be further understood that various raised areas 40 will benefit from the present invention such that the raised areas disclosed are not limited by the illustrated embodiment. [¶21]

The raised areas 40 are an array of discrete spots formed circumferentially about the stabilizer bar assembly 30. Other geometries such as an array of raised segments 40' (Figure 3), and a continuous raised line 40'' (Figure 4) will likewise benefit from the present invention. [¶22]

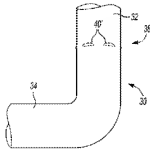


Fig-3

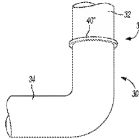


Fig-4

As the anti-shift collar 38 is thermally formed to the outer surface of the stabilizer bar assembly 30, the collar is advantageously formed onto the bar after the end of the bar is formed. The end of the bar typically includes an attachment such as a forged spade end. The surface properties of the stabilizer bar assembly 30 are minimally affected by the thermal spraying operation as the stabilizer bar assembly 30 operates as a relatively large heat sink. Moreover, as the anti-shift collar 38 may be located in other areas, the central segment 32 is a preferred location since forces are applied axially along this segment thereby minimizing fatigue effects from contact between the collar 38. As the collar 38 is integral to the stabilizer bar assembly 30, there is no possibility of loosening. [¶¶23-24]

Summary of Claim 1

Claim 1 recites:

1. A stabilizer bar assembly comprising:
a stabilizer bar; and
an anti-shift collar thermally formed onto said stabilizer bar.

Thus, with reference to Figure 2 claim 1 recites an anti-shift collar thermally formed *onto* said stabilizer bar.

Summary of Claim 18

Claim 18 recites:

18. A stabilizer bar assembly comprising:
a stabilizer bar; and
an anti-shift collar locally applied to an outer surface of said stabilizer bar.

Thus, with reference to Figure 2 claim 18 recites an anti-shift collar *locally applied to an outer surface* of said stabilizer bar.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

I. Claims 1-5 and 14-20 were rejected under 35 U.S.C. §102(b) as being anticipated by EP 0496949.

ARGUMENT

§102 Rejection

I. Rejections Over EP 0496949

A. EP '949 is non-analogous art.

The English abstract of EP '949 discloses only “the stabilizer rod (9) each comprise a continuous depression (11) with a negative wedge-shape which is provided with peripheral surfaces (flanks 11a) and into which the outer mounting part (13) with a continuous raised portion (12) with a positive wedge-shape engages with the interposition of the resilient sleeve (14) . . .” Initially, it should be noted that:

An abstract and the underlying document of which it is a summary are distinct documents. In a rejection, an abstract stands on its own--it does not incorporate by reference any disclosure of the underlying document. Abstracts are often not written by the author of the underlying document, and may be erroneous or misleading--in virtually all cases, they are incomplete.

Generally an abstract does not provide enough information to permit an objective evaluation of the validity of what it describes. Thus, an abstract is even less reliable a basis to extrapolate the alleged teachings of the underlying document to different circumstances. Abstracts function to alert a reader to disclosures of possible interest. They are little more reliable than headlines or brief newspaper articles.

Citation of an abstract without citation and reliance on the underlying scientific document itself is generally inappropriate where both the abstract and the underlying document are prior art. It is our opinion that a proper examination under 37 CFR Section 1.104 should be based on the underlying documents and translations, where needed. Accordingly, the preferred practice is for the examiner to cite and rely on the underlying document.

See Ex parte Gavin, 62 U.S.P.Q.2D (BNA) 1680

Appellant appreciates the Examiner's attempt to obtain a translation, however, without a translation of the full EP '949 reference, Appellant has not been provided with a full opportunity to further refute the Examiner's contention. Appellant requests that the Examiner obtain a full translation to substantiate the rejection or drop the rejections as rejections over an abstract translation alone are improper.

From the drawings alone, EP '949 discloses only a mounting for the stabilizer rod, not an anti-shift collar as recited in Appellant's claims. That is, EP '949, at best, discloses a type of mounting bracket more similar to Appellant's mounting bracket 36 (see Appellant's Figure 1) rather than an anti-shift collar as disclosed and claimed by Appellant. The claims are properly allowable for this reason alone.

B. EP '949 fails to disclose an anti-shift collar thermally formed *onto* a stabilizer bar.

Aside from the lack of complete translation, EP '949 fails to disclose or suggest an anti-shift collar thermally formed *onto* a stabilizer bar. As illustrated in the EP '949 reference, and as previously discussed, nothing is formed *onto* (claim 1) or is anything applied to an outer surface (claim 18) of the stabilizer bar.

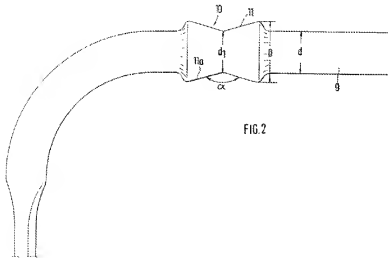


FIG. 2

Under any proper interpretation, the continuous depression 11 is formed *into* the stabilizer bar 9. This is further supported by the Examiner's own English translation which specifically recites "a

continuous *depression*” that can only properly be interpreted as being into a surface rather than *formed onto* or *applied to* a surface as recited in Appellant’s claims. Thus, even if the Examiner does not give patentable weight to the term thermally formed, the EP ‘949 reference fails to meet the onto limitation recited in Appellant’s claims. All claims are properly allowable for this reason alone.

The Examiner continues to argue that “whether the raised portions are upon or into is not patentably distinct as this limitation also relates to the method of forming the device.” This simply cannot be sustained. The terms “upon” and “into” are broad but patentably distinct claim limitations. The plain meaning of the word “into” is, of course, different than the plain meaning of the word “onto.” The Examiner’s assertion that these limitations may also relate to a method of forming the device is, even if true, beside the point since even by the Examiner’s own phraseology, the limitations must also relate to a distinct physical difference in the device itself. The claims are properly allowable.

Furthermore, Appellant’s dependent claims recite specific limitations which are neither disclosed nor suggested by the EP ‘949 reference.

Claim 14

Claim 14 specifically recites wherein said anti-shift collar comprises a solidified material atop an outer surface of said stabilizer bar. The EP ‘949 reference fails to disclose a solidified material *atop* an outer surface of the stabilizer bar. As discussed above, EP ‘949, at best, discloses only a depression formed into the bar.

Claim 15

Claim 15 recites wherein said anti-shift collar comprises a built up area upon an outer surface of said stabilizer bar. Again, in no way can EP ‘949 be properly interpreted as disclosing a built up area upon an outer surface of a stabilizer bar. Appellant here, as with claim 14, delineates that a solidified material or a built up area is located atop or upon an outer surface of the stabilizer bar. A depression, even which results in a continuous raised portion (12) of EP ‘949 is not located atop or upon an outer surface of the stabilizer bar, but is actually formed into the stabilizer bar. That is, if a section were taken through the bar, EP ‘949 would be a singular component while Appellant

would have a first material atop or upon a second outer surface of the bar. Upon or atop distinguishes Appellant's claims from EP '949.

Claim 16

Claim 16 recites a localized application of a molten material onto an outer surface of said stabilizer bar. Again, claim 16 further delineates that a material is locally applied *onto* an outer surface of the stabilizer bar. EP '949 cannot meet this limitation.

Claim 17

Claim 17 recites wherein said array of raised areas comprise a plurality of discrete raised areas spaced apart from each other. EP '949 discloses no such discrete raised areas.

Independent Claim 18 Is Separately Patentable

Appellant's independent claim 18 recites an anti-shift collar locally applied to an outer surface of said stabilizer bar. As discussed above, even if EP '949 may be interpreted as disclosing an anti-shift collar thermally formed *onto* a stabilizer bar as recited in Claim 1, EP '949 cannot meet the locally applied to an outer surface limitation as EP '949 is not applied – it is, at best, formed into/onto -- the stabilizer bar.

Claims 19 and 20

Dependent claims 19 and 20 which depend from claim 18 include the applied to said outer surface limitations as generally discussed above. These limitations cannot be met by EP '949.

CONCLUSION

For the above reasons, the rejections by the Examiner should be reversed. The Commissioner is authorized to charge the \$500 appeal brief fee and \$120 for a one month extension of time to Deposit Account No. 50-1482. If any additional fees or extensions are due, please charge Deposit Account No. 50-1482.

Respectfully Submitted,

CARLSON, GASKEY & OLDS, P.C.

/David L. Wisz/
DAVID L. WISZ
Registration No. 46,350
Attorneys for Appellant
400 West Maple, Suite 350
Birmingham, Michigan 48009
(248) 988-8360

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CLAIMS APPENDIX

1. A stabilizer bar assembly comprising:
a stabilizer bar; and
an anti-shift collar thermally formed onto said stabilizer bar.
2. The stabilizer bar assembly as recited in claim 1, wherein said anti-shift collar comprises an array of raised areas.
3. The stabilizer bar assembly as recited in claim 2, wherein said array of raised areas comprise an array of spots.
4. The stabilizer bar assembly as recited in claim 2, wherein said array of raised areas comprise an array of lines.
5. The stabilizer bar assembly as recited in claim 1, wherein said anti-shift collar comprises a raised line extending about a circumference of said stabilizer bar.
14. The stabilizer bar assembly as recited in claim 1, wherein said anti-shift collar comprises a solidified material atop an outer surface of said stabilizer bar.
15. The stabilizer bar assembly as recited in claim 1, wherein said anti-shift collar comprises a built up area upon an outer surface of said stabilizer bar.
16. The stabilizer bar assembly as recited in claim 1, wherein said anti-shift collar comprises a localized application of a molten material onto an outer surface of said stabilizer bar.
17. The stabilizer bar assembly as recited in claim 2, wherein said array of raised areas comprises a plurality of discrete raised areas spaced apart from each other.

18. A stabilizer bar assembly comprising:

a stabilizer bar; and

an anti-shift collar locally applied to an outer surface of said stabilizer bar.

19. The stabilizer bar assembly as recited in claim 18, wherein said anti-shift collar comprises a solidified material applied to said outer surface to form said anti-shift collar at least partially around said outer surface of said stabilizer bar.

20. The stabilizer bar assembly as recited in claim 18, wherein said anti-shift collar comprises a thermally formed layer applied to said outer surface to form a raised area.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.